

COMPOSITIONS FOR THE DETECTION OF ENZYME ACTIVITY IN BIOLOGICAL SAMPLES AND METHODS OF USE THEREOF

ABSTRACT OF THE DISCLOSURE

5 The present invention provides for novel reagents whose fluorescence
increases in the presence of particular proteases. The reagents comprise a characteristically
folded peptide backbone conjugated to two fluorophores such that the fluorophores are
located opposite sides of a cleavage site.. When the folded peptide is cleaved, as by digestion
with a protease, the fluorophores provide a high intensity fluorescent signal at a visible
10 wavelength. Because of their high specificity and their high fluorescence signal in the
visible wavelengths, these protease indicators are particularly well suited for detection of
protease activity in biological samples, in particular in frozen tissue sections. Thus this
invention also provides for methods of detecting protease activity *in situ* in frozen sections..